

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An apparatus for directing communications over a network, comprising:

[[~~(a)~~]] a control component that includes a dispatch module and a flow control module;

a flow state communication channel established between the dispatch module and the flow control module that is independent of one or more associated data flows;

the dispatch module ~~that~~ receives a data flow requesting a resource and determines when the data flow is unassociated with a connection to a the requested resource~~[[, wherein the control component]]~~;

~~associates a selected connection to the requested resource when the control component determines the data flow is unassociated with the connection to the requested resource; and~~

the flow control module makes available flow handling information related to the unassociated flow using the flow state communication channel; and

(b) a switch component that employs the ~~connection~~ flow state communication channel associated with the data flow to direct the data flow to the requested resource, wherein a capacity of the switch component and a

capacity of the control component are independently scalable to support the number of data flows that are directed to requested resources over the network.

2. (Original) The apparatus of Claim 1, wherein the control component employs a buffer to list each data flow that is associated with the connection to the requested resource.

3. (Original) The apparatus of Claim 1, wherein the control component employs a table to list each data flow associated with the connection to the requested resource.

4. (Original) The apparatus of Claim 1, wherein the control component categorizes a plurality of data packets for each data flow.

5. (Original) The apparatus of Claim 1, wherein the control component determines when an event associated with the data flow occurs.

6. (Original) The apparatus of Claim 5, wherein the control component categorizes each event.

7. (Original) The apparatus of Claim 1, further comprising a flow signature that is associated with the data flow, wherein the flow signature is compared to a set of rules for handling each data flow that is associated with the connection to the requested resource.

8. (Original) The apparatus of Claim 7, wherein the flow signature includes information about a source and a destination for each data packet in the data flow.

9. (Previously Presented) The apparatus of Claim 7, wherein the flow signature is associated with a timestamp.

10. (Original) The apparatus of Claim 1, wherein the switch component collects metrics regarding each connection to each resource.

11. (Original) The apparatus of Claim 1, further comprising a server may controller that includes the action of the control component and switch component.

12. (Currently Amended) An apparatus for directing communications over a network, comprising:

[[a)] a flow component that receives packets associated with a flow and switches each received packet associated with the flow to a connection;~~and~~

[[b)] a control component that determines the connection based on information collected by the flow component; [[, wherein]]

a flow state channel between the control component and the flow component that makes data flow handling instructions for the determined connection accessible to the flow component; and

the flow segment component and the control segment component are independently scalable to handle the number of data flows that are directed to requested resources over the network.

13. (Original) The apparatus of Claim 12, wherein the control component performs control and policy enforcement actions for each flow.

14. (Original) The apparatus of Claim 12, wherein the flow component collects information regarding each flow including metrics and statistics.

15. (Original) The apparatus of Claim 14, wherein the control component performs load balancing for each flow based on the information collected by the flow component.

16. (Original) The apparatus of Claim 12, further comprising a primary control component and a secondary control component, wherein a load is shared between the primary and secondary control components and when the primary control component is inoperative, the secondary control component takes over the actions of the primary control component and the flow component provides the state information for each flow.

17. (Original) The apparatus of Claim 12, further comprising a server array controller that includes the control component and the flow component.

18. (Original) The apparatus of Claim 17, wherein the server array controller includes an interface for internal and external networks.

19. (Original) The apparatus of Claim 12, further comprising a flow signature that is associated with each flow.

20. (Original) The apparatus of Claim 12, further comprising a timestamp that is associated with each flow, wherein the control component employs the timestamp to determine factors used for load balancing, the

Application Number: 09/814,415 Type of Response: Amendment
Attorney Docket Number: 10.007C1 Response Submission/Mailing Date: 1-17-2007
factors include most active, least active, time opened and most recent activity.

21. (Original) The apparatus of Claim 12, further comprising a session that is associated with the flow, the session including TCP and UDP.

22. (Original) The apparatus of Claim 12, wherein the control component determines when a new flow occurs based on the detection of an event.

23. (Currently Amended) A method for directing communications over a network, comprising:

~~(a) employing a control component to receive~~
receiving a data flow requesting a resource; ~~and determining~~
~~when the data flow is~~

identifying an unassociated data flow;
~~with a connection to a requested resource, wherein a selected~~
~~connection is associated~~

making flow handling information related to the unassociated
data flow accessible over an independent connection; [[with]]

associating the requested resource [[when]] with the new data flow is ~~unassociated with the connection to the requested resource; and~~

[[((b))]] employing flow handling information from the
independent connection ~~associated with the data flow~~ to switch the data flow

to the requested resource, wherein the switching capacity and the control capacity are independently scalable to support the number of data flows that are directed to requested resources over the network.

24. (Original) The method of Claim 23, further comprising sending state information as multicast messages and other information as point cast messages.

25. (Original) The method of Claim 23, further comprising responding to messages that are authenticated.

26. (Original) The method of Claim 23, further comprising employing a state sharing message bus (SSMB) between a switch and a control component.

27. (Original) The method of Claim 26, further comprising layering the SSMB on top of a session, the session including TCP and UDP.

28. (Original) The method of Claim 26, further comprising asynchronous and independent communication between the control component and the switch.

29. (Original) The method of Claim 23, further comprising associating a flow signature with each flow.

30. (Previously Presented) The method of Claim 23, further comprising comparing when the data flow is associated with the connection to the requested resource and when the control component determines that the data flow is unassociated with the connection to the requested resource,

Application Number: 09/814,415

Type of Response: Amendment

Attorney Docket Number: 10.007C1

Response Submission/Mailing Date: 1-17-2007

wherein the comparison is employed to determine the data flow's association with the connection to the requested resource.

31. Cancelled.

32. (New) A network communication system, comprising:

a flow dispatch module being provided with data flow handling information that is used to identify network resource requests associated with existing data flows;

an independent flow state connection, established between the flow dispatch module and a data flow control module, which enables providing the flow dispatch module with data flow handling information relating to any number of existing data flows, without increasing the load on existing data flow connections; and

the data flow handling information related to any existing data flows being accessible over the independent flow state connection to avoid increasing traffic load.